



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7

11201 Renner Boulevard  
Lenexa, Kansas 66219

JUN 14 2017

**MEMORANDUM**

**SUBJECT:** Sampling and Analysis Plan and QAPP Addendum for Remedial Investigation Cherokee County Site OU8 Railroads; Cherokee County, Kansas – Approved with Condition

**FROM:** *Diane Harris*  
Diane Harris, Regional Quality Assurance Manager  
Environmental Sciences and Technology Division

**TO:** Elizabeth Hagenmaier, Remedial Project Manager  
Lead Mining and Special Emphasis Branch  
Superfund Division

The review of the subject document prepared by HydroGeoLogic, Inc. and dated March 2017, has been completed according to the “EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations,” EPA QA/R-5 March 2001. The QAPP Addendum is an addendum to the previously approved “Generic QAPP for Region 7’s Superfund Lead-Contaminated Sites” (R7QAO Document Number: 2013137).

Based on the comments below, the document is approved with conditions. The document was found to be incomplete in addressing some key areas to the extent of potentially jeopardizing the quality of the data. These areas are fully described in this review memorandum as critical comments and can be adequately addressed by incorporation into the document but without resubmission. The document would not be approved without addressing these issues. General comments identify opportunities for strengthening the document but do not affect approval.

**Critical Comments**

1. § 1.3 Problem Definition/Background, page 1 in QAPP Addendum. Beginning with this section, the QAPP Addendum refers to the 2007 generic QAPP. However, the current version of the generic QAPP is dated April 2013. See also Appendix A to the SAP which includes the 2007 generic QAPP. Because generic QAPPs are only valid for five years, the references to the 2007 generic QAPP need to be updated in the QAPP Addendum as well as Appendix A to the SAP so that it does not appear an outdated generic QAPP is being used for this project.
2. § 3.2 Soil Investigation, page 3-1 in SAP. The removal action objectives developed by EPA for the site which the data will be compared to need to be included. Otherwise, it cannot be verified the detection and/or reporting limits achieved by the laboratory for the selected method are sensitive enough.
3. § 4.5.3 XRF Soil Sample Analysis, page 4-3 in SAP. Based on the description of XRF soil sample analysis provided in this section, it does not appear samples will be sieved and dried before XRF

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analysis per method M200. Is this correct? Has it been determined that moisture is not an issue for these samples?

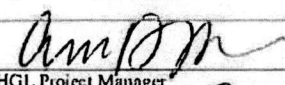
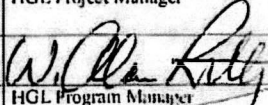
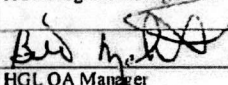
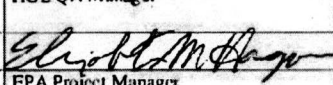
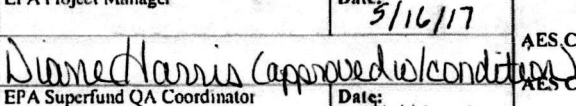
### **General Comments**

4. § 1.2 Project/Task Organization, page 1 in QAPP Addendum. The last sentence in this section simply reads “Personnel for soil sampling.” It is not clear what this statement is referring to or if there is information missing?
5. § 2.5 Quality Control Requirements, page 3 in QAPP Addendum. Although not specifically noted here, it is assumed the RPD criteria of  $\pm 25\%$  as suggested in the generic QAPP will apply.
6. § 4.1 Data Review, Validation, and Verification Requirements, page 4 in QAPP Addendum. Please note the analytical methods and SOP 2410.10 will form the basis of data review and verification. SOPs 2430.06 and 2430.12 focus on lab audits and the quality control policy rather than individual data package review and verification procedures. See also § 4.2.
7. Table 1: Sampling Summary, page 4 in QAPP Addendum.
  - a. Please note the Regional Laboratory will follow SOP 3122.03 for SW-846 Method 6010 and SOP 3123.01 for SW-846 Method 6020.
  - b. It is not clear why this table identifies both 6010 and 6020 but Table 3 only refers to 6010. Table 4.2 in the SAP also only refers to 6010. It is assumed 6010 is the selected method.
  - c. It is not clear why the sampling method for XRF confirmation soil samples is shown as 4230.19 but Table 3 only lists 4231.2012.
8. Table 2: Data Quality Objectives Summary, page 5 in QAPP Addendum. Please note the 2013 version of the generic QAPP addresses sample handling procedures in Section 3.2 rather than 2.3 and data management procedures in Section 3.10 rather than 2.10.
9. § 3.1 Overview of Sampling Regime, page 3-1 in SAP. Please note the current version of SOP 4220.03 is 4220.03B.
10. § 3.2 Soil Investigation, page 3-1 in SAP. Please note the generic QAPP does not actually include quality goals for comparing XRF screening and fixed-laboratory data results. It is assumed referenced SOP 4220.03 which does address XRF screening and fixed-laboratory data results applies.
11. § 4.4 Sampling Method, page 4-2 in SAP. Are there any procedures, requirements, or standards to be followed for the collection and management of GPS data? If SOP 2341.01 for geospatial data deliverables applies, it should be referenced here.
12. Appendix D to SAP. The Region 7 SOPs included in this appendix are woefully outdated and should be replaced with the current versions.

If you have any questions, please contact me at x7258.

R7QAO Document Number: 2017167

**Region 7 Superfund Program  
Quality Assurance Project Plan Form  
Project Information:**

<b>Site Name:</b> Cherokee County Superfund Site OU 8 (TO73)		<b>City:</b> Cherokee County (County-Wide)	<b>State:</b> Kansas
<b>EPA Project Manager:</b> Elizabeth Hagenmaier		<b>HGL Project Manager:</b> Andrea Fletcher	
<b>Approved By:</b> 	<b>Title:</b> HGL Project Manager	<b>Date:</b> 3/31/17	<b>Prepared For:</b> EPA Region 7 Superfund Division
<b>Approved By:</b> 	<b>Title:</b> HGL Program Manager	<b>Date:</b> 3/31/2017	
<b>Approved By:</b> 	<b>Title:</b> HGL QA Manager	<b>Date:</b> 3/31/2017	<b>Prepared By:</b> Andrea Fletcher <b>Date:</b> March 31, 2017
<b>Approved By:</b> 	<b>Title:</b> EPA Project Manager	<b>Date:</b> 5/16/17	
<b>Approved By:</b> 	<b>Title:</b> EPA Superfund QA Coordinator	<b>Date:</b> 06/14/2017	<b>AES Contractor:</b> HydroGeoLogic, Inc. (HGL) <b>AES Contract Number:</b> EP-S7-05-05

**1.0 Project Management:**

**1.1 Distribution List**

**EPA—Region 7:** Elizabeth Hagenmaier, EPA Project Manager  
Diane Harris, Superfund QA Coordinator

**AES Project Managers:** Andrea Fletcher

**1.2 Project/Task Organization**

Elizabeth Hagenmaier, the EPA TOPO, will serve as the EPA Project Manager for activities described in this QAPP. Andrea Fletcher from HGL will serve as the Task Order Manager (TOM), the HGL Project Manager. Personnel for soil sampling.

**1.3 Problem Definition/Background:**

**Description:** This site-specific Quality Assurance Project Plan form is prepared as an addendum to the Generic Quality Assurance Project Plan for Region 7's Superfund Lead-Contaminated Sites (June 2007) and contains site-specific data quality objectives (Table 2) for the sampling activities described herein.

☐ Problem Definition/Background Description attached.

☒ Description in referenced report: Final RI Report Cherokee County Operable Unit 8 Railroads Site March 2016  
Title Date

**1.4 Project/Task Description:**

☐ CERCLA PA

☒ Other (description included)

☐ CERCLA SI

☐ Pre-CERCLIS Site Screening

☐ Brownfields Assessment

☐ Removal Assessment

**Schedule:** Field work is tentatively scheduled for May - June 2017.

☐ Description in referenced report.

Title

Date

**1.5 Quality Objectives and Criteria for Measurement Data:**

a. Accuracy:

☒ Identified in attached Table 2.

b. Precision:

☒ Identified in attached Table 2.

c. Representativeness:

☒ Identified in attached Table 2.

d. Completeness:

☒ Identified in attached Table 2.

e. Comparability:

☒ Identified in attached Table 2.

**Other Description:** A completeness goal of 100 percent for the confirmation samples has been established for this project. However, if the completeness goal is not met, EPA may still be able to make site decisions based on any or all of the remaining validated data.

**1.6 Special Training/Certification Requirements:**

☒ OSHA 1910

☐ Special Equipment/Instrument Operator

☐ Other (describe below):

**SAMPLING AND ANALYSIS PLAN  
REMEDIAL INVESTIGATION  
CHEROKEE COUNTY SITE - OU8 RAILROADS  
CHEROKEE COUNTY, KANSAS  
TASK ORDER 0073**

**PROJECT:** Remedial Design  
Cherokee County Site - OU8 Railroads

**TASK ORDER NUMBER:** 0073

**HYDROGEOLOGIC, INC.**

<b>PROGRAM MANAGER:</b>	W. Alan Rittgers, P.G.
<b>TASK ORDER MANAGER:</b>	Andrea Fletcher
<b>REGIONAL QC COORDINATOR:</b>	Mary Knowles

**U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 7**

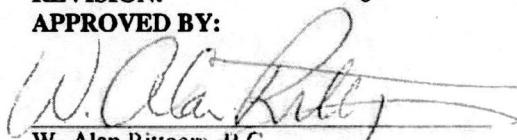
**TASK ORDER PROJECT OFFICER (TOPO):** Elizabeth Hagenmaier


**PREPARATION DATE:** March 31, 2017

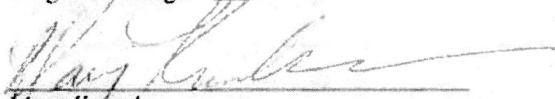
**PLAN PREPARER:** HGL

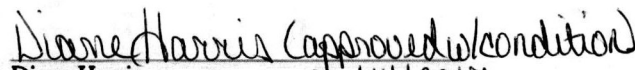
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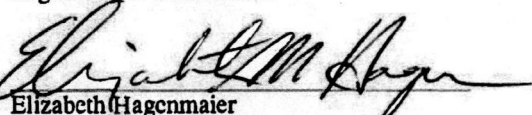
**APPROVED BY:**

  
W. Alan Rittgers, P.G.  
HydroGeoLogic, Inc.  
Program Manager

  
Andrea Fletcher  
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Task Order Manager

  
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HydroGeoLogic, Inc.  
Regional QC Coordinator

  
Diane Harris  
U.S. Environmental Protection Agency, Region 7  
Quality Assurance Officer  
06/14/2017

  
Elizabeth Hagenmaier  
U.S. Environmental Protection Agency - Region 7  
Task Order Project Officer (TOPO)

**DOCUMENT DISTRIBUTION LIST:**

Elizabeth Hagenmaier, TOPO - 1 copy for use/distribution  
Andrea Fletcher, TOM - 1 copy for use/distribution

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